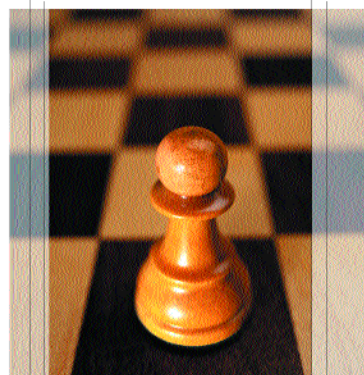


Environmental Matters

As a public power provider and regional development agency, TVA has a strong commitment to protect the environment. TVA balances supplying low-cost, reliable power with responsible stewardship of the Tennessee Valley's resources and seeks to involve the public in its environmental decision-making to ensure its actions are responsive to the needs of Valley residents both today and tomorrow.



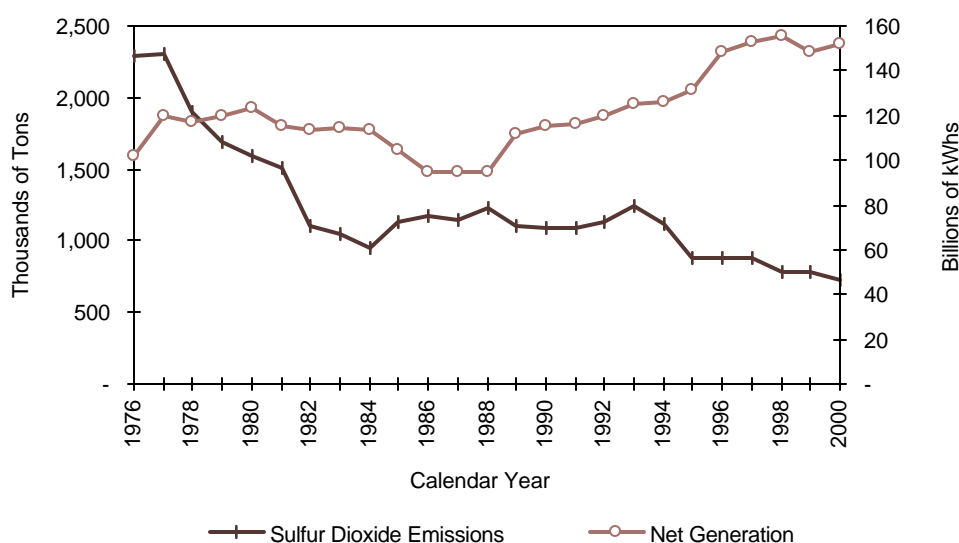
TVA and Air Quality in the Tennessee Valley

According to a report issued in January 1998 by the Tennessee Department of Environment and Conservation and the annual air quality trends report issued by the Environmental Protection Agency (EPA), air quality in the Tennessee Valley and the nation has steadily improved over the last ten years. TVA is significantly reducing emissions from its coal-fired plants while supplying low-cost, reliable power. Over the past several years, TVA has made notable efforts to enhance its environmental performance.

SO₂ Emissions Reduction

While producing 25 percent more electricity from its coal-fired plants, TVA has reduced sulfur dioxide (SO₂) emissions by 65 percent since 1976. This reduction contributed to a 40 percent decline in overall SO₂ concentrations in the Tennessee Valley air between 1979 and 1998, according to EPA figures.

*SO₂ Emissions Reduction
1976 - 2000*

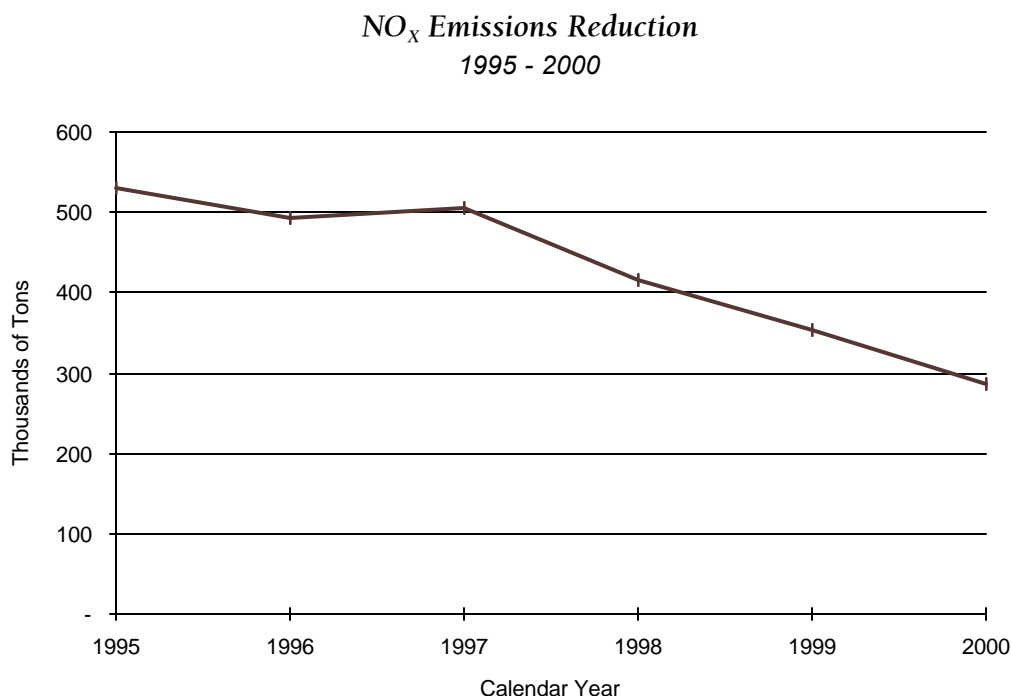


SO₂ emissions have been reduced through a mix of desulfurization equipment, such as scrubbers and fluidized bed combustion; burning a lower sulfur coal; and using alternate fuels, such as gas and biomass. TVA plans to reduce SO₂ by 80 percent from 1976 levels by 2005.



NO_x Emissions Reduction

In addition to reducing SO₂ while producing more electricity, TVA also reduced nitrogen oxide (NO_x) emissions by 33 percent since 1995.



TVA plans to reduce NO_x emissions during the ozone season (May - September) by 75 percent from 1995 levels by 2005.

NO_x emissions have been reduced by installing low NO_x burners or overfire air on 40 of TVA's 59 coal-fired units. Other types of controls such as boiler optimization are being used to reduce NO_x emissions at the remaining 19 units.

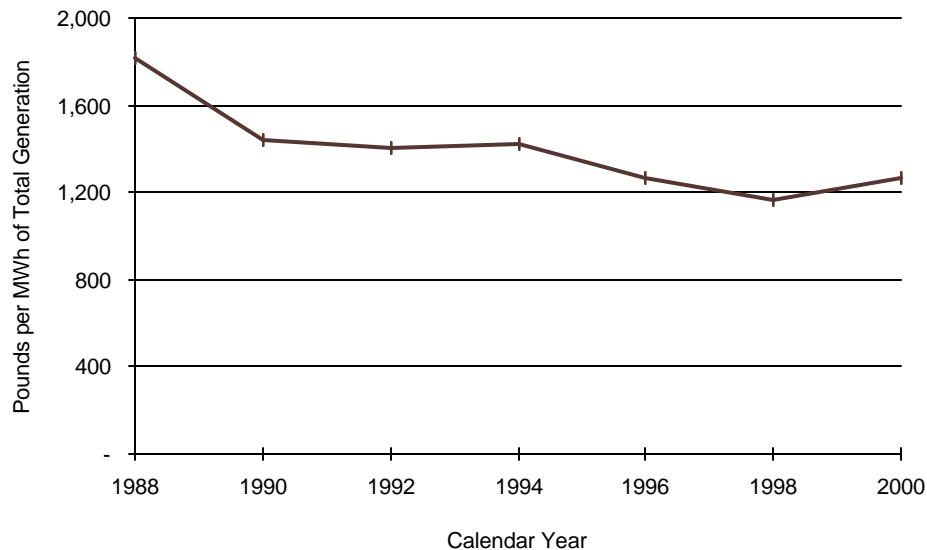
During 1998, TVA adopted a new clean air strategy to install ten selective catalytic reduction (SCR) systems to reduce NO_x emissions from its coal-fired plants. In 2000, TVA committed to an additional eight SCRs to further reduce NO_x emissions. A SCR system removes nitrogen oxides by directing the flue gas into a SCR reactor. Ammonia is injected into the gas, and as the gas passes through the catalyst in the reactor, the NO_x becomes harmless nitrogen and water vapor. These 18 SCR systems will control emissions from a total of 25 units at Allen, Bull Run, Kingston, and Cumberland in Tennessee, Widows Creek and Colbert in Alabama, and Paradise in Kentucky. The first of TVA's SCRs was installed at Paradise Unit 2 in May 2000, with the second system being installed in 2001 at Paradise Unit 1.

TVA has spent more than \$2.6 billion on emissions control equipment at its 11 coal-fired plants since the mid-1970s. Over the next four years, TVA's cost of implementing its SCR strategy is expected to be in excess of \$850 million.

CO₂ Emissions Reduction

TVA has made significant reductions in carbon dioxide (CO₂) emissions since 1988 by improving the efficiency and capacity of its hydro plants, co-firing biomass with coal at some of its fossil units, bringing Browns Ferry Nuclear Unit 2 and Watts Bar Nuclear Unit 1 on line, and improving the efficiency of its fossil system.

*CO₂ Emissions Reduction
1988 - 2000*



Research Efforts

TVA is involved in research to determine the effects of a number of different kinds of pollutants on public health and the environment, typically in concert with EPA and other federal and state agencies. Some of these studies include the Southern Oxidants Study on ozone formation and transport; a partnership effort to monitor particulates in Kentucky, Tennessee, and Alabama; a long-term study in the Great Smoky Mountains National Park to measure the different factors that control nitrogen in a forested system; and the Metallicus Study which will help TVA and EPRI learn more about mercury emissions and what happens to them.

Clean Air Proceedings

On November 3, 1999, EPA issued a compliance order to TVA, alleging that TVA had violated the Clean Air Act over the past 20 years at 14 units located at nine of TVA's coal-fired electric generating plants. The order was based on a new interpretation of EPA's regulation about what constitutes "routine maintenance, repair or replacement" that was contrary to EPA's prior interpretation of its new source review (NSR) rules.

Between December 1999 and May 2000, TVA and EPA representatives met on a number of occasions to negotiate a resolution to this dispute, including two meetings between the TVA Board and then-EPA Administrator Carol Browner.

When no resolution could be reached with EPA, TVA filed a petition for review of the compliance order on May 4, 2000, in the Eleventh Circuit Court of Appeals. In August 2000, the court stayed (suspended) EPA's order at TVA's request, and the order remains stayed.

EPA also started a separate administrative process before its own internal Environmental Appeals Board (EAB).

On September 15, EPA's EAB issued a decision that reversed 50 percent of the violations identified in EPA's order but upheld the remainder. TVA has now petitioned for review of the EAB decision. The Eleventh Circuit recently decided to consolidate its review of the order with its review of the EAB decision. Oral argument is expected to be scheduled by the court this spring, with a decision possibly being issued in early summer.

The Tennessee Valley Public Power Association (the association representing the distributors of TVA power), Alabama Power, Georgia Power, and Duke Energy are participating in the Eleventh Circuit proceedings in support of TVA.

The National Parks Conservation Association and the Sierra Club filed cases in federal district courts raising the same NSR allegations at TVA's Bull Run plant and Colbert Unit 5 as in the EPA proceedings.

TVA and Water Quality in the Tennessee Valley

The quality of the water in the Tennessee River affects not only the people who live in the Valley but also business and industry and the entire ecosystem's plant and animal life. Twelve watershed teams are a vital part of TVA's stewardship efforts throughout the 42,000 square-mile Tennessee River watershed. These teams work in partnership with business, industry, government agencies, and community groups to address a variety of issues, such as shoreline management, wetlands, and clean drinking water. Their efforts yield tangible results as illustrated by state fish and wildlife agencies' reintroduction of the indigenous lake sturgeon into waters from which it had long been absent, a project made possible by improved water quality.

However, TVA does not have the regulatory authority to set water quality standards. The EPA and each of the Valley states that share the river set their own pollution regulations and grant discharge permits. Those controls are mostly focused on business and industrial operations located along the river, not on the activities of the general public.

In managing the watershed, TVA uses an integrated method that balances water quality with other demands on the system. Some of the items managed are:

- **Rating reservoirs**—Five ecological indicators are used to assess the ecological condition of many TVA reservoirs to determine the health of the river.
- **Monitoring fish populations**—TVA issues ratings which indicate the quality of aquatic life and monitors the size and health of bass populations in 19 reservoirs.
- **Clean water**—TVA works with other agencies, communities, and industries to improve water quality and began the Clean Water Initiative, which helps to ensure the benefits of clean water for communities and aquatic life.
- **Clean boating**—As an active participant in the national Clean Boating Campaign, TVA helps educate boating enthusiasts and marina operators in practices that reduce pollution and erosion on the waterways. TVA has developed the Tennessee Valley Clean Marina Initiative, which addresses such activities as sewage management, oil and gas control, marina siting, and erosion prevention. The initiative certifies marinas that are in compliance with pollution-control standards and allows them to use the Clean Marina logo and

flag. For marina owners, it makes good business sense to protect the resource on which their livelihood depends.

- **Aiding aquatic life**—In 1991, TVA undertook a \$44 million tailwater-improvements program to tackle problems associated with hydropower production that are harmful to fish and other aquatic life. Studies show that this program has improved conditions for aquatic life in more than 300 miles of river and has resulted in a dramatic increase in tail water fishing, which aids local economies.
- **Limits on stream discharges**—TVA obtains discharge permits for each of its power generation facilities and some of its maintenance and power service shops. Discharge limits are set at levels that protect aquatic life and human health.

TVA and Land Management

TVA is responsible for the management of 293,000 acres of public land and 11,000 miles of public shoreline in the Tennessee Valley. In carrying out its land management responsibilities, TVA considers the effects of its activities in such areas as land reclamation, public recreational use, economic development, and wildlife preservation.

Wildlife Habitat

More than 122,000 acres of public land under TVA's management have been designated for natural-resource management, which includes the preservation of wildlife habitat. About 60 percent of this total is administered by TVA, with the remaining portion managed by other agencies as wildlife management areas or refuges.

To analyze and manage biodiversity on TVA lands and to improve compliance with federal environmental regulations, TVA launched the Natural Heritage Project in 1976 with the help and support of the Nature Conservancy. The project maintains data on threatened and endangered plant and animal species in the TVA service area and conducts fieldwork aimed at protecting threatened and endangered species and environmentally sensitive sites. In addition, it maintains databases on geological features, natural areas, and other sensitive natural resources. Since its inception, the Natural Heritage Project has provided environmental input on TVA activities that range from transmission line construction to economic development.

Land Reclamation

TVA has been involved in land reclamation efforts since its founding in 1933. At that time, much of the Tennessee Valley's topsoil had been depleted by outdated agricultural methods, and TVA scientists worked with farmers to restore the land to health. Over the years, TVA has joined many public and private partners in reclaiming land to combat erosion and protect water quality. These efforts have earned national and international recognition. Some of its successes include:

- **The Copper Basin**—In the late nineteenth and early twentieth centuries, copper mining and smelting in this area of southeast Tennessee and north Georgia caused massive environmental damage, creating a moonscape almost completely devoid of vegetation. For its efforts in reclaiming this area over the last six decades, TVA received the 1998 Environmental Achievement Grand Award from the International Erosion Control Association.

- **Coal Mines**—In 1971, TVA launched a successful test project to demonstrate that mountaintops could be returned to approximately their original contours after coal removal. This approach was later incorporated into federal legislation that regulated surface mining.
- **Other types of mines**—In 1981, TVA and other groups began reclaiming abandoned mica, kaolin, and feldspar mines in western North Carolina. Runoff from eroding mine sites was seriously damaging water quality in the region. The project demonstrated innovative reclamation techniques and cooperative approaches that have since been widely used in the U.S. and abroad.
- **Reservoir shoreline**—Field assessments of over half of TVA's more than 11,000 miles of public shoreline identified over 100 miles of critically eroded shoreline. Since 1995, TVA and its partners have stabilized 88 sites extending 16.3 miles. One of the restoration techniques used in the project is soil bioengineering, a relatively new approach that combines plants and engineered structures to achieve soil stability.

Regional Resource Stewardship Council

TVA formed the Regional Resource Stewardship Council to aid in its commitment to manage the Tennessee River system to optimize the benefits for all the people of the Tennessee Valley. Through the Council, the citizens of the Tennessee Valley can participate in the important decisions TVA makes regarding the management of the Valley's natural resources.

The TVA Regional Resource Stewardship Council consists of 20 members representing people across the Tennessee Valley who are vitally interested in TVA's management of the region's natural resources. The members are nominated by the governors of the seven states in the TVA power service area, the distributors of TVA power, and TVA's directly served customers. Representatives of other interested groups are chosen by TVA.

The purpose of the Council is to gather advice from all sectors so that TVA can respond in a responsible way to the needs of people across the region. The Council invites public input into its deliberations.

Four subcommittees and one working group reflect the Council's priorities as established in its initial organizational meetings.

- **Integrated River Management**—This subcommittee studies TVA's management of the Tennessee River System for multiple public benefits.
- **Public Lands Management**—The work of this subcommittee relates to TVA's stewardship of public lands and natural resources.
- **Navigation Infrastructure**—This group advises TVA on issues related to navigation on the Tennessee River and the maintenance of a safe and efficient waterway.
- **Water Quality**—TVA's activities regarding the improvement of water quality in the Tennessee River watershed are the focus of this group's efforts.
- **Legislative Action Working Group**

TVA's Green Power SwitchSM

TVA, several local public power distributors, and Valley environmental groups became the first in the Southeast to offer consumers the opportunity to underwrite the production of power from cleaner, renewable resources—solar, wind, and landfill gas. The Green Power Switch program began as a one-year market test and reflects TVA's commitment as a publicly owned utility to develop low-impact energy sources.

Landfill gas is expected to provide the greatest proportion of green power during the market test period. The methane gas that landfills emit can be collected and converted into an energy resource using a highly developed and mature technology. Other sources of green power include wind and solar energy. Capturing wind energy creates no air pollution and, if the turbines are sited properly, has little environmental impact. TVA currently has three wind turbines near Clinton, TN. Solar power makes use of one of the cleanest energy sources available. TVA is currently installing photovoltaic panel arrays in the service areas of several participating power distributors. In addition, BP Amoco agreed in October 2000 to make available to TVA's Green Power Switch program electricity generated by solar panels installed on new BP stations in Tennessee. Although the program's capacity to generate energy from wind and sunlight is small initially, it is anticipated that capacity will grow as demand increases.

Environmental Partnerships

TVA has forged cooperative agreements with a variety of federal and state agencies and private organizations dedicated to the protection of biodiversity in the southeastern U.S. Some of TVA's projects include improving the ecological health of the Great Smoky Mountains National Park with the National Park Service, improving the condition of the Tennessee River watershed fisheries with Trout Unlimited and the Bass Anglers Sportsman Society, and helping to conserve woodlands with the Nature Conservancy.